

### ABSTRACT OF THE DISCLOSURE

5 Metallopeptide combinatorial libraries and methods of making libraries and metallopeptides are provided, for use in biological, pharmaceutical and related applications. The combinatorial libraries are made of peptides, peptidomimetics and peptide-like constructs, and include a metal ion-binding region thereof which includes at least one orthogonal sulfur-protecting group, in which the peptide, peptidomimetic or construct is conformationally fixed on deprotection of the sulfur and complexation of  
10 the metal ion-binding region with a metal ion. Thereafter the library members may be screening to select those with the desired specificity and affinity.